

DETAILED ACTION

This application has been examined. Claims 1-21 are pending.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 03/31/2011 has been entered.

Response to Arguments

Applicant's arguments filed 03/31/2011 have been fully considered but they are moot in view of the new grounds of rejection.

The Applicant presents the following argument(s) [*in italics*]:

... the cited references do not teach, suggest or describe "[a] method of accessing data from a plurality of servers comprising: ... adding an identity of the first server to the data and forwarding the data to the client computer wherein subsequent requests received from the client computer include said first server identity and sending

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each of said subsequent requests to said first server." (e.g., as described in the embodiment of claim 1).

The Examiner respectfully disagrees with the Applicant.

Colasurdo Column 7 Lines 45-65 disclosed directing requests to an appropriate server based on factors such as content-based rules, load balancing rules and session affinity rules. Upon receiving a client browser request Colasurdo reviews the request to determine to which server it must be dispatched. Typically, the request dispatch routine will first determine which server group handles requests of that type (i.e., content-based factors which are usually derived from the URI of the request). Then, it will select a particular clone in that server group taking into consideration at least session affinity rules (e.g., it will try to send the request in any given session to the same server in the group) and load balancing rules (i.e., it will attempt to spread the request load evenly among the server clones in the group).

Colasurdo Column 4 Lines 1-15 disclosed wherein when a server creates a session, it assigns a unique session ID value that is sent back top the client machine under the name jsessionid. Thereafter, the client machine will include the session Id in all requests issued to that server farm. The session ID might be sent in a cookie that forms part of the request. Alternately, it might be appended to the URI of the request in a mechanism known as URL rewriting.

Colasurdo Column 8 Lines 1-25 disclosed wherein a unique clone identification code identifying a specific clone within a server group can be appended to the jsessionid as shown below: jsessionid=abcdefg:ucid123 (1) where ucid123 is a unique

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clone identification code. Accordingly, when a front-end request dispatch software module receives requests corresponding to any given session and server group, it can read the clone identification code appended to the jsessionid and direct them always to the same clone in the server group whenever possible.

Colasurdo disclosed (re. Claim 1,8) wherein *subsequent requests received from the client computer include said first server identity;* (Colasurdo- Column 8 Lines 1-25, *wherein a unique clone identification code identifying a specific clone within a server group can be appended to the jsessionid as shown below: jsessionid=abcdefg:ucid123 (1) where ucid123 is a unique clone identification code) and sending each of said subsequent requests to said first server.* (Colasurdo- Column 7 Lines 45-65, *send the request in any given session to the same server in the group,* Column 9 Lines 35-45, *wherein the client machine sends a URI to the server farm that requires processing in the first server group again. As usual, the request dispatcher will determine the appropriate server group from the URI and will parse the jsessionid cookie from left to right and will now use the first unique clone identification code when it encounters it to send the request to the same server clone that had serviced previous requests with that session ID and thus, hopefully, already has the session data stored locally.)*

Priority

The effective date of the claims described in this application is February 27, 2002.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-14 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 8-14 are directed towards '*a load balancer*'. The claimed subject matter does not fall under any one of the classification of statutory subject matter.

The claimed *load balancer* is not a machine, an article of manufacture, a composition of matter or a process and thus cannot be patented.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 15-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 15-21 pertain to '*a computer-readable medium having stored thereon computer-executable instructions*'. Upon inspection of the Applicant Specifications (Page 4, Paragraphs 12-13) the Examiner interprets the *computer-readable medium*

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being possibly embodied by, but is not limited to, RAM, ROM, etc. Thus applying the broadest reasonable interpretation in light of the specification and taking into account the meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the networking art, the claim as a whole covers both transitory and non-transitory media including those entirely of transmission mediums such carrier waves. The Examiner notes that transmission mediums embodying computer-executable instructions are non-statutory subject matter because they do not fall into any of the categories of statutory subject matter.

The Examiner notes that where carrier waves are concerned, the transmission medium is an embodiment of a data signal. Absent some physical context, a signal per se is an abstract idea in much the same way that a mathematical algorithm without context is an abstract idea.

The claims may be amended by changing '*computer readable medium*' to -- 'non transitory *computer readable medium*' -- thus excluding that portion of the scope covering transitory signals. The scope of the disclosure given the state-of-the-art covers both transitory and non-transitory media, and this amendment would limit the claims to an eligible (i.e. non-transitory) embodiment.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil et al. (US Patent 6128279), hereinafter referred to as O'Neil, in view of Barrera et al. (US Patent 6748448), hereinafter referred to as Barrera further in view of Colasurdo US Patent 7543066).

O'Neil disclosed (re. Claim 1,8) a method of accessing data from a plurality of servers comprising: (Figure 1-4, Column 3 Lines 10-15, Column 3 Lines 55-65) receiving a request for the data from a client computer; (Column 7 Lines 55-65) sending the request to a first server of the plurality of servers; receiving the data from the first server.(Column 8 Lines 1-35, Column 9 Lines 5-30) and forwarding the data to the client computer

However O'Neil did not disclose certain features of the invention, such as adding an identity of the first server to the data, and the adding the identity of the first server comprises revising the at least one URL to include a server identifier that corresponds to the first server.

Barrera disclosed a system and method of increasing performance by reducing latency the client experiences between sending a request to the server and receiving a response. Barrera disclosed of receiving a request for network content and modifying

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the URL, such that the URL request resource file physical I/O address is preferably embedded in the client computer browser page URL link, thereby establishing a correspondence between the browser page element and the resource file. (Barrera - Column 4 Lines 10-50, Column 8 Lines 50-65, Column 9 Lines 1-10) Barrera also disclosed of sending a host server name to a Domain Name System (DNS) server in order to look up the IP address of the indicated server. (Barrera - Column 3 Lines 35-45)

O'Neil and Barrera are analogous art because they present concepts and practices regarding improving the network system performance in the context of fulfilling content requests received from a client computer. The Examiner respectfully suggests that at the time of the invention it would have been obvious to combine the teachings of Barrera regarding modifying the URL and imbedding the physical device identification into the URL into the system of O'Neil. The said combination would enable the system of O'Neil to 1) add an identity of the first server to the data, and 2) add the identity of the first server by revising the at least one URL to include a server identifier that corresponds to the first server. The suggested motivation for doing so would have been, as Barrera suggests (Column 4 Lines 1-5), to increase the performance of computer networks without requiring modifications of existing browser and enable by-passing some data storage access layers.

While O'Neil-Barrera substantially disclosed the claimed invention O'Neil-Barrera did not disclose (re. Claim 1,8) wherein *subsequent requests received from the client computer include said first server identity; and sending each of said subsequent requests to said first server.*

Colasurdo Column 7 Lines 45-65 disclosed directing requests to an appropriate server based on factors such as content-based rules, load balancing rules and session affinity rules. Upon receiving a client browser request Colasurdo reviews the request to determine to which server it must be dispatched. Typically, the request dispatch routine will first determine which server group handles requests of that type (i.e., content-based factors which are usually derived from the URI of the request). Then, it will select a particular clone in that server group taking into consideration at least session affinity rules (e.g., it will try to send the request in any given session to the same server in the group) and load balancing rules (i.e., it will attempt to spread the request load evenly among the server clones in the group).

Colasurdo Column 4 Lines 1-15 disclosed wherein when a server creates a session, it assigns a unique session ID value that is sent back top the client machine under the name jsessionid. Thereafter, the client machine will include the session Id in all requests issued to that server farm. The session ID might be sent in a cookie that forms part of the request. Alternately, it might be appended to the URI of the request in a mechanism known as URL rewriting.

Colasurdo Column 8 Lines 1-25 disclosed wherein a unique clone identification code identifying a specific clone within a server group can be appended to the jsessionid as shown below: jsessionid=abcdefg:ucid123 (1) where ucid123 is a unique clone identification code. Accordingly, when a front-end request dispatch software module receives requests corresponding to any given session and server group, it can read the clone identification code appended to the jsessionid and direct them always to the same clone in the server group whenever possible.

Colasurdo disclosed (re. Claim 1,8) wherein *subsequent requests received from the client computer include said first server identity;* (Colasurdo- Column 8 Lines 1-25, *wherein a unique clone identification code identifying a specific clone within a server group can be appended to the jsessionid as shown below: jsessionid=abcdefg:ucid123 (1) where ucid123 is a unique clone identification code*) and *sending each of said subsequent requests to said first server.* (Colasurdo- Column 7 Lines 45-65, *send the request in any given session to the same server in the group,* Column 9 Lines 35-45, *wherein the client machine sends a URI to the server farm that requires processing in the first server group again. As usual, the request dispatcher will determine the appropriate server group from the URI and will parse the jsessionid cookie from left to right and will now use the first unique clone identification code when it encounters it to send the request to the same server clone that had serviced previous requests with that session ID and thus, hopefully, already has the session data stored locally.*)

Colasurdo and O'Neil are analogous art because they present concepts and practices regarding improving the network system performance in the context of fulfilling content requests received from a client computer. At the time of the invention it would have been obvious to combine Colasurdo into O'Neil-Barrera to include a system component for implementing the Colasurdo load-balancing rules and schemes while assuring that subsequent requests are serviced by the same server that previously serviced requests with that session ID. (Colasurdo-Column 8 Lines 25-35)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 2,9) determining whether the request includes a server identifier. (O'Neil-Column 4 Lines 1-35)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 3,10) wherein the request is a Uniform Resource Locator (URL). (O'Neil-Column 4 Lines 1-35)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 4,11) wherein the data is a HyperText Markup Language (HTML) page. (Barrera-Column 2 Lines 55-65)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 5,12) wherein the HTML page comprises at least one Uniform Resource Locator (URL). (o-1Column 8 Lines 1-35)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 6,13) wherein the sending the request to the first server comprises a load balancing algorithm. (O'Neil-Column 3 Lines

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55-65)

O'Neil-Barrera-Colasurdo disclosed (re. Claim 7,14) wherein the sending the request to the first server comprises sending the request to a server identified by the server identifier. (Colasurdo- Colasurdo- Column 7 Lines 45-65, *send the request in any given session to the same server in the group*, Column 9 Lines 35-45, *wherein the client machine sends a URI to the server farm that requires processing in the first server group again. As usual, the request dispatcher will determine the appropriate server group from the URI and will parse the jsessionid cookie from left to right and will now use the first unique clone identification code when it encounters it to send the request to the same server clone that had serviced previous requests with that session ID and thus, hopefully, already has the session data stored locally.*)

Claims 15-21 (re. a computer-readable medium) are rejected on the same basis as Claims 1-7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Neil et al. (US Patent 6128279), hereinafter referred to as O'Neil, in view of Bodwell et al. (US Patent 6954783) hereinafter referred to as Bodwell further in view of Colasurdo US Patent 7543066).

O'Neil disclosed (re. Claim 1,8) a method of accessing data from a plurality of servers comprising: (Figure 1-4, Column 3 Lines 10-15, Column 3 Lines 55-65) receiving a request for the data from a client computer; (Column 7 Lines 55-65) sending the request to a first server of the plurality of servers; receiving the data from the first server.(Column 8 Lines 1-35, Column 9 Lines 5-30)

However O'Neil did not disclose certain features of the invention, such as adding an identity of the first server to the data and forwarding the data to the client computer, and the adding the identity of the first server comprises revising the at least one URL to include a server identifier that corresponds to the first server.

Bodwell disclosed adding an identity of the first server to the data and forwarding the data to the client computer, and the adding the identity of the first server comprises revising the at least one URL to include a server identifier that corresponds to the first server. (Bodwell-Column 4 Lines 60 thru Column 5 Lines 25).

O'Neil and Bodwell are analogous art because they present concepts and practices regarding improving the network system performance in the context of fulfilling content requests received from a client computer. The Examiner respectfully suggests that at the time of the invention it would have been obvious to combine the teachings of Bodwell regarding modifying the URL and imbedding the physical device identification into the URL into the system of O'Neil. The said combination would enable the system of O'Neil to 1) add an identity of the first server to the data and forward the data to the client computer, and 2) add the identity of the first server by revising the at least one URL to include a server identifier that corresponds to the first server. The suggested motivation for doing so would have been, as Bodwell suggests (Column 2 Lines 20-35), to provide substantial advantages for mediating web pages.

While O'Neil-Bodwell substantially disclosed the claimed invention O'Neil-Bodwell did not disclose (re. Claim 1,8) wherein *subsequent requests received from the client computer include said first server identity; and sending each of said subsequent requests to said first server.*

Colasurdo Column 7 Lines 45-65 disclosed directing requests to an appropriate server based on factors such as content-based rules, load balancing rules and session affinity rules. Upon receiving a client browser request Colasurdo reviews the request to determine to which server it must be dispatched. Typically, the request dispatch routine will first determine which server group handles requests of that type (i.e., content-based factors which are usually derived from the URI of the request). Then, it will select a particular clone in that server group taking into consideration at least session affinity

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rules (e.g., it will try to send the request in any given session to the same server in the group) and load balancing rules (i.e., it will attempt to spread the request load evenly among the server clones in the group).

Colasurdo Column 4 Lines 1-15 disclosed wherein when a server creates a session, it assigns a unique session ID value that is sent back to the client machine under the name `jsessionid`. Thereafter, the client machine will include the session ID in all requests issued to that server farm. The session ID might be sent in a cookie that forms part of the request. Alternately, it might be appended to the URI of the request in a mechanism known as URL rewriting.

Colasurdo Column 8 Lines 1-25 disclosed wherein a unique clone identification code identifying a specific clone within a server group can be appended to the `jsessionid` as shown below: `jsessionid=abcdefg:ucid123` (1) where `ucid123` is a unique clone identification code. Accordingly, when a front-end request dispatch software module receives requests corresponding to any given session and server group, it can read the clone identification code appended to the `jsessionid` and direct them always to the same clone in the server group whenever possible.

Colasurdo disclosed (re. Claim 1,8) wherein *subsequent requests received from the client computer include said first server identity*; (Colasurdo- Column 8 Lines 1-25, *wherein a unique clone identification code identifying a specific clone within a server group can be appended to the jsessionid as shown below: jsessionid=abcdefg:ucid123 (1) where ucid123 is a unique clone identification code*) and sending each of said subsequent requests to said first server. (Colasurdo- Column 7 Lines 45-65, *send the*

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request in any given session to the same server in the group, Column 9 Lines 35-45, wherein the client machine sends a URI to the server farm that requires processing in the first server group again. As usual, the request dispatcher will determine the appropriate server group from the URI and will parse the jsessionid cookie from left to right and will now use the first unique clone identification code when it encounters it to send the request to the same server clone that had serviced previous requests with that session ID and thus, hopefully, already has the session data stored locally.)

Colasurdo and O'Neil are analogous art because they present concepts and practices regarding improving the network system performance in the context of fulfilling content requests received from a client computer. At the time of the invention it would have been obvious to combine Colasurdo into O'Neil-Bodwell to include a system component for implementing the Colasurdo load-balancing rules and schemes while assuring that subsequent requests are serviced by the same server that previously serviced requests with that session ID. (Colasurdo-Column 8 Lines 25-35)

Claim 8 is rejected on the same basis as Claim 1.

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 2,9) determining whether the request includes a server identifier. (O'Neil-Column 4 Lines 1-35)

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 3,10) wherein the request is a

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Uniform Resource Locator (URL). (O'Neil-Column 4 Lines 1-35)

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 4,11) wherein the data is a HyperText Markup Language (HTML) page. (Bodwell-Column 4 Lines 55-65)

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 5,12) wherein the HTML page comprises at least one Uniform Resource Locator (URL). (O'Neil-Column 8 Lines 1-35)

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 6,13) wherein the sending the request to the first server comprises a load balancing algorithm. (O'Neil-Column 3 Lines 55-65)

O'Neil-Bodwell-Colasurdo disclosed (re. Claim 7,14) wherein the sending the request to the first server comprises sending the request to a server identified by the server identifier. (Colasurdo- Column 7 Lines 45-65, *send the request in any given session to the same server in the group*, Column 9 Lines 35-45, *wherein the client machine sends a URI to the server farm that requires processing in the first server group again. As usual, the request dispatcher will determine the appropriate server group from the URI and will parse the jsessionid cookie from left to right and will now use the first unique clone identification code when it encounters it to send the request to the same server clone that had serviced previous requests with that session ID and thus, hopefully, already has the session data stored locally.*)

Claims 15-21 (re. a computer-readable medium) are rejected on the same basis as Claims 1-7.

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please refer to the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREG BENGZON whose telephone number is

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(571)272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/GREG C BENGZON/
Primary Examiner, Art Unit 2444